Name _____ Quiz 4

1) Find the indefinite integral below.

$$\int \cos(4x)\,dx = \frac{1}{4}\sin(4x) + C$$

2) Find the definite integral below.

$$\int_1^2 4x^3 dx = x^4|_1^2 = 2^4 - 1^4 = 16 - 1 = 15$$

3) The expression below is supposed to give the area under $y = x^2$ between $x = 2$ and $x = 5$. Fill in the missing piece.

$$\lim_{n\to\infty} \sum_{k=1}^{n} \boxed{\frac{3}{n}} \cdot \left(2 + k\frac{3}{n}\right)^2$$

For whatever reason I felt like doing some fancy grading on this quiz:
Check = Full credit
Check- = 1 point less than full credit
X+ = half credit
X = no credit

Highest scoring problem = 4 points
Second Highest scoring problem = 3 points
Lowest scoring problem = 2 points
Grade = average of those 9 points

Cheating warning: A couple people had remarkably similar answers. Did you cheat? Big risk. I wasn't 100% convinced so I didn't charge anybody. But it's a risk because you will automatically fail the course if you get caught cheating on a test.